

19. Describe the ultrastructure of neurohypophysis. Explain the structure and functions of neurohypophysial hormones.
20. Give an account on the ultrastructure of adrenal gland and add a note on the functions of epinephrine.
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S.No. 3315

P 16 ZOE 1 B

(For candidates admitted from 2016–2017 onwards)

M.Sc DEGREE EXAMINATION, NOVEMBER 2022.

Zoology - Elective

ENDOCRINOLOGY

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20)

Answer ALL questions.

1. Differentiate endocrine and paracrine secretions.
2. How do nuclear receptors contribute to hormone action?
3. What is the role of Y-organ in a crustacean?
4. How does prothoracic gland affect insect moulting?
5. What is the importance of corpus luteum in oogenesis?
6. Define oligoovulation.
7. What is pars tuberalis?

8. What is the function of parafollicular cells in thyroid?
9. Define a heterocrine gland.
10. What is the cause of Cushing's syndrome?

PART B — ($5 \times 5 = 25$)

Answer ALL questions, choosing either (a) or (b).

11. (a) Give a brief account on the importance of tracers in hormone research.

Or

- (b) Explain with a diagram the feedback control of thyroid hormone secretion.

12. (a) Give an account on the role of gonad inhibiting hormone in crustacean reproduction.

Or

- (b) What is ecdysteroid? Explain its chemical nature and function.

13. (a) Describe the ultrastructure of a mammalian testis.

Or

- (b) Describe the ultrastructure of a mammalian ovary.

14. (a) Write a short account on lactotrophs.

Or

- (b) Comment on the metabolic functions of thyroid hormone.

15. (a) Describe in brief the synthesis, processing and mechanism of action of insulin hormone.

Or

- (b) What is glucocorticoid? Which endocrine gland produces it? What are its functions?

PART C — ($3 \times 10 = 30$)

Answer any THREE questions.

16. Write an essay on the scope and importance of endocrine research with special emphasis on the clinical significance of endocrinology.

17. With a neat diagram explain the ultrastructure of mandibular organ. Describe the endocrine functions of mandibular organ.

18. What is metamorphosis? Explain the role of different hormones involved in metamorphosis in a holometabolous insect.